

Listing of Claims

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Previously Presented) An apparatus comprising:
a wafer adapted to fit on a wafer stage of a lithography tool, the wafer comprising
a radiation detector to produce a signal corresponding to an amount of radiation incident on the radiation detector,
a processor in communication with the radiation detector to receive the signal, the processor to process the signal from the radiation detector, and
a wireless transmitter in communication with the processor to receive results of processing the signal and output a wireless signal based on the results.
2. (Canceled)
3. (Previously Presented) The apparatus of Claim 1, wherein the detector is adapted to detect a dose of radiation.
4. (Previously Presented) The apparatus of Claim 1, wherein the detector is adapted to detect an intensity of radiation.

5. (Original) The apparatus of Claim 1, wherein the detector comprises an array of detectors.

6. (Previously Presented) The apparatus of Claim 1, wherein the wafer further comprises alignment marks.

7. (Previously Presented) The apparatus of Claim 1, wherein the wafer further comprises an amplifier in communication with the radiation detector and the processor, the amplifier to amplify the signal from the radiation detector and communicate the amplified signal to the processor.

8. (Previously Presented) The apparatus of Claim 1, wherein the wafer further comprises a power source in communication with the processor to provide power to the processor.

9. (Previously Presented) A system comprising:
a processor; and
a radiation detector adapted to communicate with the processor, the radiation detector dimensioned to fit on a wafer stage of a lithography tool, the radiation detector comprising
a detector element to detect an amount of radiation incident on the detector element, and
a memory to store data describing the amount of radiation detected.

10. (Previously Presented) The system of Claim 9, wherein:

the processor is adapted to compare the amount of radiation detected to a reference; and

the processor further comprises an output to output a signal for calibrating the lithography tool.

11. (Previously Presented) The system of Claim 9, wherein the radiation detector further comprises a wireless data transmitter to wirelessly transmit the data to the processor.

12. (Previously Presented) An apparatus comprising:
a wafer sized to fit on a wafer stage of a lithography tool, the wafer comprising:

a radiation detector to produce a signal describing an amount of radiation incident on the radiation detector;

a processor electrically coupled to the radiation detector, the processor to process the signal from the radiation detector; and

a memory electrically coupled to the processor, the memory to store data received from the processor, the data resulting from the processing of the signal describing the amount of radiation incident on the detector.

13. (Previously Presented) The apparatus of Claim 12, wherein the wafer further comprises an output connector adapted to output data from the memory.

14. (Previously Presented) The apparatus of Claim 12, wherein the wafer further comprises a wireless transmitter coupled to the memory to wirelessly output the data from the memory.

15. (Previously Presented) An apparatus comprising:
a wafer substrate sized to fit on a wafer stage of a lithography tool;

a radiation detector fabricated on the wafer substrate, the radiation detector to produce a signal indicative of an amount of radiation incident on the radiation detector;

a processor attached to the wafer substrate, the processor electrically coupled to the radiation detector, the processor to process the signal indicative of the amount of radiation incident on the radiation detector; and

a wireless transmitter fabricated on the wafer substrate, the wireless transmitter in communication with the processor to receive results of processing the signal and output a wireless signal based on the results.

16. (Previously Presented) The apparatus of Claim 15, further comprising a memory to store the results of processing the signal after receipt from the processor.

17. (Previously Presented) A method comprising:
loading a wafer-shaped detector onto a wafer stage of a first lithography tool;
detecting an amount of radiation from the first lithography tool that is incident on the wafer-shaped detector; and
wirelessly transmitting a first signal indicative of the amount of radiation incident on the wafer-shaped detector to a remote receiver.

18. (Canceled)

19. (Original) The method of Claim 17, further comprising aligning the wafer-shaped detector on the wafer stage.

20. (Previously Presented) The method of Claim 17, further comprising converting a signal indicative of the amount of radiation incident on the wafer-shaped detector to the first signal.

21. (Original) The method of Claim 17, wherein said detecting the amount of radiation comprises measuring a dose of radiation.

22. (Original) The method of Claim 17, wherein said detecting the amount of radiation comprises measuring an intensity of radiation.

23. (Previously Presented) The method of Claim 17, further comprising amplifying an output from the detector.

24. (Original) The method of Claim 17, further comprising removing the wafer-shaped detector from the wafer stage.

25. (Previously Presented) The method of Claim 17, further comprising comparing the amount of radiation incident on the wafer-shaped detector to a pre-determined reference value.

26. (Previously Presented) The method of Claim 25, further comprising adjusting a setting of the lithography tool if the amount of radiation incident on the wafer-shaped detector does not substantially match the pre-determined reference value.

27. (Previously Presented) The method of Claim 26, further comprising repeatedly detecting an amount of radiation incident on the detector, and transmitting a one or more second signals indicative of the amount of radiation detected by the repeated detections.

28. (Currently Amended) The method of Claim 17, further comprising:

loading the wafer-shaped detector onto a wafer stage of a second lithography tool;

detecting an amount of radiation from the second lithography tool that is incident on the wafer-shaped detector; and

wirelessly transmitting a second signal indicative of the amount of radiation incident on the wafer-shaped detector to [[a]] the remote receiver.

29. (Original) The method of Claim 28, further comprising comparing the amount of radiation detected by the detector in the first lithography tool to the amount of radiation detected by the detector in the second lithography tool.

30. (Previously Presented) The system of Claim 9, wherein the radiation detector comprises a wafer-shaped radiation detector.

31. (Previously Presented) The system of Claim 9, further comprising an extreme ultraviolet lithography tool, wherein the the radiation detector is dimensioned to fit on the wafer stage of the extreme ultraviolet lithography tool.